



## **DEPARTMENT OF TRANSPORTATION**

### **Federal Aviation Administration**

#### **14 CFR Part 39**

**[Docket No. FAA-2021-0781; Project Identifier AD-2021-00775-E; Amendment 39-21831; AD 2021-24-10]**

**RIN 2120-AA64**

#### **Airworthiness Directives; Austro Engine GmbH Engines**

**AGENCY:** Federal Aviation Administration (FAA), DOT.

**ACTION:** Final rule.

**SUMMARY:** The FAA is superseding Airworthiness Directive (AD) 2021-09-04 for all Austro Engine GmbH E4 and E4P model diesel piston engines. AD 2021-09-04 required replacing a certain oil pump as well as the oil filter and engine oil. This AD was prompted by reports of an oil pump blockage on E4 model diesel piston engines. This AD requires replacing a certain oil pump as well as the oil filter and engine oil. The FAA is issuing this AD to address the unsafe condition on these products.

**DATES:** This AD is effective [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

The Director of the Federal Register approved the incorporation by reference of a certain other publication listed in this AD as of May 10, 2021 (86 FR 21637, April 23, 2021).

**ADDRESSES:** For service information identified in this final rule, contact Austro Engine GmbH, Rudolf-Diesel-Strasse 11, 2700 Weiner Neustadt, Austria; phone: +43 2622 23000; website: [www.austroengine.at](http://www.austroengine.at). You may view this service information at the Airworthiness Products Section, Operational Safety Branch, FAA, 1200 District Avenue, Burlington, MA 01803. For information on the availability of this material at the FAA, call (817) 222-5110. It is also available at <https://www.regulations.gov> by searching for and locating Docket No. FAA-2021-0781.

## **Examining the AD Docket**

You may examine the AD docket at <https://www.regulations.gov> by searching for and locating Docket No. FAA-2021-0781; or in person at Docket Operations between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this final rule, any comments received, and other information. The address for Docket Operations is U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE, Washington, DC 20590.

**FOR FURTHER INFORMATION CONTACT:** Wego Wang, Aviation Safety Engineer, ECO Branch, FAA, 1200 District Avenue, Burlington, MA 01803; phone: (781) 238-7134; fax: (781) 238-7199; email: [wego.wang@faa.gov](mailto:wego.wang@faa.gov).

## **SUPPLEMENTARY INFORMATION:**

### **Background**

The FAA issued a notice of proposed rulemaking (NPRM) to amend 14 CFR part 39 to supersede AD 2021-09-04, Amendment 39-21517 (86 FR 21637, April 23, 2021), (AD 2021-09-04). AD 2021-09-04 applied to all Austro Engine GmbH E4 and E4P model diesel piston engines. The NPRM published in the *Federal Register* on September 14, 2021 (86 FR 51026). The NPRM was prompted by reports of an oil pump blockage on E4 model diesel piston engines caused by oil contamination with casting sand from the production process of oil pump part number (P/N) E4A-50-000-BHY. The root cause was found to be an improperly performed sand casted oil pump housing cleaning process. In the NPRM, the FAA proposed to continue to require replacement of an affected oil pump, identified by P/N and serial number (S/N) in Austro Engine GmbH Mandatory Service Bulletin No. MSB-E4-030/4, Revision No. 4, dated March 30, 2021. In the NPRM, the FAA also proposed to require replacement of the oil filter and engine oil.

### **Discussion of Final Airworthiness Directive**

### **Comments**

The FAA received no comments on the NPRM or on the determination of the costs.

## Conclusion

The FAA reviewed the relevant data and determined that air safety requires adoption of the AD as proposed. Accordingly, the FAA is issuing this AD to address the unsafe condition on these products. This AD is adopted as proposed in the NPRM.

## Related Service Information under 1 CFR Part 51

The FAA reviewed Austro Engine GmbH Mandatory Service Bulletin No. MSB-E4-030/4, Revision No. 4, dated March 30, 2021 (the MSB). This service information specifies procedures for replacing the affected oil pumps installed on E4 and E4P model diesel piston engines. This service information also specifies procedures for replacing the oil filter and engine oil installed on these engines. In addition, this service information identifies the applicable S/Ns of affected E4 and E4P model diesel piston engines, the affected oil pumps requiring replacement, and an additional oil pump replacement option. The Director of the Federal Register previously approved the MSB for incorporation by reference on May 10, 2021 (86 FR 21637, April 23, 2021). This service information is reasonably available because the interested parties have access to it through their normal course of business or by the means identified in the ADDRESSES section.

## Costs of Compliance

The FAA estimates that this AD affects 55 engines installed on airplanes of U.S. registry.

The FAA estimates the following costs to comply with this AD:

### Estimated costs

Action	Labor Cost	Parts Cost	Cost per product	Cost on U.S. operators
Remove and replace the oil pump, oil filter, and engine oil	16 work-hours x \$85 per hour = \$1,360	\$1,488	\$2,848	\$156,640

The FAA has included all known costs in its cost estimate. According to the manufacturer, however, some of the costs of this AD may be covered under warranty, thereby reducing the cost impact on affected individuals.

## **Authority for this Rulemaking**

Title 49 of the United States Code specifies the FAA's authority to issue rules on aviation safety. Subtitle I, Section 106, describes the authority of the FAA Administrator. Subtitle VII, Aviation Programs, describes in more detail the scope of the Agency's authority.

The FAA is issuing this rulemaking under the authority described in Subtitle VII, Part A, Subpart III, Section 44701, General requirements. Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This regulation is within the scope of that authority because it addresses an unsafe condition that is likely to exist or develop on products identified in this rulemaking action.

## **Regulatory Findings**

The FAA has determined that this AD will not have federalism implications under Executive Order 13132. This AD will not have a substantial direct effect on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government.

For the reasons discussed above, I certify that this AD:

- (1) Is not a "significant regulatory action" under Executive Order 12866,
- (2) Will not affect intrastate aviation in Alaska, and
- (3) Will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

## **List of Subjects in 14 CFR Part 39**

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

## **The Amendment**

Accordingly, under the authority delegated to me by the Administrator, the FAA amends 14 CFR part 39 as follows:

### **PART 39 - AIRWORTHINESS DIRECTIVES**

1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

### **§ 39.13 [Amended]**

2. The FAA amends § 39.13 by:

a. Removing Airworthiness Directive 2021-09-04, Amendment 39-21517 (86 FR 21637, April 23, 2021); and

b. Adding the following new airworthiness directive:

**2021-24-10 Austro Engine GmbH:** Amendment 39-21831; Docket No. FAA-2021-0781; Project Identifier AD-2021-00775-E.

#### **(a) Effective Date**

This airworthiness directive (AD) is effective [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

#### **(b) Affected ADs**

This AD replaces AD 2021-09-04, Amendment 39-21517 (86 FR 21637, April 23, 2021).

#### **(c) Applicability**

This AD applies to all Austro Engine GmbH E4 and E4P model diesel piston engines.

#### **(d) Subject**

Joint Aircraft System Component (JASC) Code 8550, Reciprocating Engine Oil System.

#### **(e) Unsafe Condition**

This AD was prompted by reports of an oil pump blockage on the E4 model diesel piston engines. The FAA is issuing this AD to prevent failure of the engine lubrication system. The unsafe condition, if not addressed, could result in failure of the engine, in-flight shutdown, and loss of the airplane.

#### **(f) Compliance**

Comply with this AD within the compliance times specified, unless already done.

#### **(g) Required Actions**

For Austro Engine GmbH E4 and E4P model diesel piston engines having an oil pump, part number (P/N) E4A-50-000-BHY, with a serial number (S/N) listed in paragraph 1.2., Engines Affected, of Austro Engine GmbH Mandatory Service Bulletin

No. MSB-E4-030/4, Revision No. 4, dated March 30, 2021 (the MSB), within the compliance time specified in Table 1 to paragraph (g) of this AD or before further flight, whichever occurs later:

(1) Remove the oil pump, P/N E4A-50-000-BHY, from service and replace with a part eligible for installation using the Accomplishment/Instructions, paragraph 2.2.1 or paragraph 2.2.2, of the MSB, as applicable.

(2) Replace the oil filter and engine oil using the Accomplishment/Instructions, paragraph 2.2.1 or paragraph 2.2.2, of the MSB, as applicable.

**Table 1 to Paragraph (g) – Replacement of the Oil Pump, Oil Filter, and Engine Oil**

<b>Engine Group</b>	<b>Engine Flight Hours (FHs) Since New as of May 10, 2021 (the effective date of AD 2021-09-04)</b>	<b>Compliance Time (after May 10, 2021, the effective date of AD 2021-09-04)</b>
Group 1 engines and Group 2 engines	10 FHs or less	Within 30 days or before accumulating 10 FHs, or during the next scheduled maintenance, whichever occurs first
Group 1 engines	More than 10 FHs, but less than 50 FHs	Within 3 months or before accumulating 70 FHs since new, or during the next scheduled maintenance, whichever occurs first
Group 1 engines	50 FHs or more	Within 3 months or 20 FHs, or during the next scheduled maintenance, whichever occurs first
Group 2 engines	More than 10 FHs	Within 3 months or 100 FHs, or during the next scheduled maintenance, whichever occurs first

**(h) No Reporting Requirements**

The reporting requirements in the Accomplishment/Instructions, paragraph 2.2., of the MSB, are not required by this AD.

**(i) Installation Prohibition**

After the effective date of this AD, do not install onto any engine an oil pump, P/N E4A-50-000-BHY, with an S/N listed in paragraph 1.2., Engines Affected, of the MSB.

**(j) Definitions**

For the purpose of this AD:

(1) Group 1 engines are E4 model diesel piston engines in configuration “-A” that are installed on single-engine airplanes.

(2) Group 2 engines are E4 model diesel piston engines in configuration “-B” or “-C” and E4P model diesel piston engines that are installed on twin-engine airplanes.

(3) A “part eligible for installation” is an oil pump with a P/N and S/N that is not listed in paragraph 1.2., Engines Affected, of the MSB.

**(k) Credit for Previous Actions**

You may take credit for replacing the oil pump, oil filter, and engine oil required by paragraph (g) of this AD if you performed these replacements before the effective date of this AD using the Accomplishment/Instructions, paragraph 2.2., of Austro Engine GmbH MSB No. MSB-E4-030, Original Issue, dated February 18, 2021; Revision No. 1, dated February 23, 2021; Revision No. 2, dated March 3, 2021; or Revision No. 3, dated March 18, 2021.

**(l) Alternative Methods of Compliance (AMOCs)**

(1) The Manager, ECO Branch, FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19. In accordance with 14 CFR 39.19, send your request to your principal inspector or local Flight Standards District Office, as appropriate. If sending information directly to the manager of the certification office, send it to the attention of the person identified in paragraph (m) of this AD. Information may be emailed to: ANE-AD-AMOC@faa.gov.

(2) Before using any approved AMOC, notify your appropriate principal inspector, or lacking a principal inspector, the manager of the local flight standards district office/certificate holding district office.

**(m) Related Information**

For more information about this AD, contact Wego Wang, Aviation Safety Engineer, ECO Branch, FAA, 1200 District Avenue, Burlington, MA 01803; phone: (781) 238-7134; fax: (781) 238-7199; email: [wego.wang@faa.gov](mailto:wego.wang@faa.gov).

**(n) Material Incorporated by Reference**

(1) The Director of the Federal Register approved the incorporation by reference (IBR) of the service information listed in this paragraph under 5 U.S.C. 552(a) and 1 CFR part 51.

(2) You must use this service information as applicable to do the actions required by this AD, unless the AD specifies otherwise.

(3) The following service information was approved for IBR on May 10, 2021 (86 FR 21637, April 23, 2021).

(i) Austro Engine GmbH Mandatory Service Bulletin No. MSB-E4-030/4, Revision No. 4, dated March 30, 2021.

(ii) [Reserved]

(4) For service information identified in this AD, contact Austro Engine GmbH, Rudolf-Diesel-Strasse 11, 2700 Weiner Neustadt, Austria; phone: +43 2622 23000; website: [www.austroengine.at](http://www.austroengine.at).

(5) You may view this service information at FAA, Airworthiness Products Section, Operational Safety Branch, 1200 District Avenue, Burlington, MA 01803. For information on the availability of this material at the FAA, call (817) 222-5110.

(6) You may view this service information that is incorporated by reference at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, email: [fr.inspection@nara.gov](mailto:fr.inspection@nara.gov), or go to: <https://www.archives.gov/federal-register/cfr/ibr-locations.html>.



Issued on November 15, 2021.

Lance T. Gant, Director,  
Compliance & Airworthiness Division,  
Aircraft Certification Service.

[FR Doc. 2021-25259 Filed: 11/18/2021 8:45 am; Publication Date: 11/19/2021]